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EXAMINER

BARNIE, REXFORD N

ART UNIT PAPER NUMBER

2643

DATE MAILED: 05/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/726,637

Applicant(s)

BEAMON ET AL.

Examiner

REXFORD N. BARNIE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 02 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5,8,10-14 and 17-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-5,8,10-14 and 17-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

*Rexford Barnie*  
REXFORD BARNIE  
PRIMARY EXAMINER

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1- 3, 5, 8, 10-14, 16, 18 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinser, Jr. et al. (US Pat# 5,790,633) in view of Kidder et al. (US Pat# 6,445,774 B1) and further in view of Kannan et al. (US Pat# 6,298,352).

Regarding claims 1 and 18, Kinser teaches a method for proactively maintaining a telephone system local loop comprising communication with a communication network and acquiring status information with a digital loop

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carrier; predicting proactive maintenance based upon the status information in (see col. 24 line 29-column 15 line 22, col. 27, col. 30 line 46-col. 31 line 5, col. 36 lines 4-12).

Furthermore, Kinser teaches generating work order information, dispatching and updating or closing tickets in (see col. 18 lines 43-56, col. 19 and col. 33). Kinser teaches status information which can include at least one of engineering information, customer information, maintenance information, service information and real-time information in (see col. 25 lines 5-9 and lines 35-44) by receiving information including customer information, alarm associated with cable cable pressure systems and using information received LMOS (loop maintenance operations system) which supplies maintenance information which includes line records and identify network troubles.

Kinser fails to teach in detail entire automation of work force services. Kidder teaches a system for automated workflow in a network management and operations system in (see disclosure) wherein workload can be dispatched to field technicians and updated based on status information in (see disclosure).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kidder into that of Kinser thus making it possible to control trouble tickets or workload in an efficient manner.

The combination fails to teach that network service maintenance would be made to comply with government standards.

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Kannan et al. teaches an apparatus and method for managing number sources in (see col. 3 lines 23-35 and col. 15 line 1-30) wherein provisioning and maintained services can be made to comply with state and federal government regulations.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kannan into that of the combination thus making it possible to provide uniformity among carriers and enhance customer satisfaction.

Regarding claim 2, see the explanation as set forth regarding claim 1.

Regarding claim 3, the combination including Kinser teaches using a weighting factor (see column 44 lines 36-44).

Regarding claim 5, the combination including Kinser teaches the claimed subject matter comprising of loop facilities and control system (see column 7 line 40-column 8).

Regarding claim 8, the combination including Kinser et al. teaches using a predictor and also, being able to dispatch a workforce to handles faults in a geographical area (see column 36, column 46 lines 38-58, column 29 lines 54-column 30 line 17, column 54 lines 34-67).

Regarding claim 10, the combination including Kinser teaches updating the digital loop carrier with completed service order or completed fault repairs, see for instance (see column 47 lines 25-32). Furthermore, any commercially available database can be used for information regarding workload. The combination including Kinser teaches a loop maintenance operating system.

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Regarding claims 11-12; the combination including Kinser teaches a loop maintenance operating system, which teaches the claimed subject matter in (see column 40 lines 23-66, column 24 lines 49-64).

Regarding claim 13, Kinser teaches communicating with a communicating network and acquiring at least one of customer information associated with copper line pairs, service information associated with copper line pairs and status information associated with a digital loop carrier; storing the acquired information, combining the stored information and predicting proactive maintenance based upon the combined information (see column 24 line 29-column 25 lines 15-22, column 27, column 30 line 46-column 31 line 5, column 36 lines 4-12, column 44 lines 36-44)). Note that the amended limitation automatically@ stills reads on the functionalities of the predictor without taking into account the previous process which can be a manual process. Furthermore, according to Kinser, the intent of his invention is to reduce manual intervention and also, the sources which the predictor can analyze could be an automatic process including an automated line insulation test, messages from switching systems and alarms from pressure cables (see column 25 lines 11-22).

Kinser teaches status information which can include at least one of engineering information, customer information, maintenance information, service information and real-time information in (see col. 25 lines 5-9 and lines 35-44) by receiving information including customer information, alarm associated with cable cable pressure systems and using information received LMOS (loop

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maintenance operations system) which supplies maintenance information which includes line records and identify network troubles.

Kinser fails to teach in detail entire automation of work force services.

Kidder teaches a system for automated workflow in a network management and operations system in (see disclosure) wherein workload can be dispatched to field technicians and updated based on status information in (see disclosure).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kidder into that of Kinser thus making it possible to control trouble tickets or workload in an efficient manner.

The combination fails to teach that network service maintenance would be made to comply with government standards.

Kannan et al. teaches an apparatus and method for managing number sources in (see col. 3 lines 23-35 and col. 15 line 1-30) wherein provisioning and maintained services can be made to comply with state and federal government regulations.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kannan into that of the combination thus making it possible to provide uniformity among carriers and enhance customer satisfaction.

Regarding claim 14, see the explanation as set forth in the rejection of claim 13.

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Regarding claim 16, the combination including Kinser teaches dispatching work order information describing the predicted proactive maintenance (see column 36, column 46 lines 38-58, column 29 lines 54-column 30 line 17, column 54 lines 34-67).

Regarding claims 21-23, The combination including Kinser teaches engineering information which includes system performance data, customer information which includes customer information including customer profiles, including complaints/trouble and location to dispatch a workforce or technician to fix problem and maintenance information as derived from a loop maintenance operation system which provides information including line records and current network troubles in (see cols. 24-26).

Claims 4, 17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinser et al. (US Pat# 5,790,633, cited by applicant) in view of Kidder and further in view of Kulatunge et al. (US Pat# 6,353,902) and Kannan (US pat# 6,298,352).

Regarding claim 17, Kinser teaches a system for proactively maintaining telephone network facilities in a PSTN (see figs. 21-26 and disclosure) comprising a loop facilities and control system (112, 136), digital loop carrier module communicating with a communication network and acquiring digital loop carrier information, a database stored in memory and a processor capable of processing information stored in the database and of generating proactive maintenance.



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Kinser teaches status information which can include at least one of engineering information, customer information, maintenance information, service information and real-time information in (see col. 25 lines 5-9 and lines 35-44) by receiving information including customer information, alarm associated with cable cable pressure systems and using information received LMOS (loop maintenance operations system) which supplies maintenance information which includes line records and identify network troubles.

Kinser fails to teach in detail entire automation of work force services. Kidder teaches a system for automated workflow in a network management and operations system in (see disclosure) wherein workload can be dispatched to field technicians and updated based on status information in (see disclosure).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kidder into that of Kinser thus making it possible to control trouble tickets or workload in an efficient manner.

The combination including Kinser fails to teach being able to dynamically predict or attend to problems or faults associating with a network.

Kulatunge et al. teaches a network fault prediction and proactive maintenance system wherein future occurrence of a fault is predicted based on an analysis of the valid log and the characteristics found in a database. Corrective measures are taken to prevent the fault from occurring (see column 3 lines 20-32, column 1 lines 10-12 and 207 of fig. 2).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kulatunge into that of the combination including Kinser thus making it possible to predict future possible errors and taken corrective measures.

The combination fails to teach that network service maintenance would be made to comply with government standards.

Kannan et al. teaches an apparatus and method for managing number sources in (see col. 3 lines 23-35 and col. 15 line 1-30) wherein provisioning and maintained services can be made to comply with state and federal government regulations.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kannan into that of the combination thus making it possible to provide uniformity among carriers and enhance customer satisfaction.

Regarding claims 4 and 19-20, see the explanation as set forth in the rejection of claim 18.

Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinser, Jr. et al. (US Pat# 5,790,633) in view of Kidder et al. (US Pat# 6,445,774 B1) and further in view of Kannan and (Frigo, US Pat# 5,710,648) or Prohaska (US Pat# 6,208,776).

Regarding claims 24-25, the Kinser teaches monitoring of fiber optic cable pressure systems (see col. 25) and doesn't teach monitoring changes in the

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pressure, temperature data and flow information. Generating alarms from cable pressure systems inherently implies taken into account pressure variations.

For the sake of argument, Frigo teaches an optical communication system and sensor system wherein changes in temperature, pressure, attenuation of signals and so forth can be detected and monitored in (see col. 4 lines 48-57, col. 8 lines 7-12, col. 5 lines 34-40).

Prohaska et al. teaches a fiber optic sensor and detection system wherein a plurality of sensors can be used in detecting fluid flow pressure, temperature, intensity and so forth in (see col. 3 lines 2-4, col. 5 lines 10-16, fig. 3, col. 6 lines 34-52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of either (Frigo or Prohaska) which takes a limitation quite similar to that of Kinser in details thus making it possible to detect characteristics associated with a fiber optical cable which according to Kinser can be used in providing proactive maintenance.

### ***Response to Arguments***

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **REXFORD N BARNIE** whose telephone number is (703)306-2744. The examiner can normally be reached on M-F 9:00-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CURTIS KUNTZ can be reached on (703) 305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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REXFORD BARNIE  
05/14/05

  
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